REMARKS

Status of the Claims

Claims 1-56 are pending in the application. Claims 2-3, 13-14 and 17-56 are withdrawn as being drawn to a nonelected invention. Claims 1, 4-12 and 15-16 are under examination.

35 U.S.C § 112, first paragraph

Claims 1, 4-12 and 15-16 were rejected by the Examiner under 35 U.S.C. § 112, first paragraph as containing subject matter which was not adequately described. The Applicants respectfully traverse this rejection.

The Examiner's rejection is directed to an alleged lack of description of the term "binding partner precursor," in particular the lack of description of the structure of the precursor. The applicants assert that the term binding partner precursor is adequately described and that a structural description is neither required or possible in this case.

As exemplified in independent claim 1, the present invention is directed to a method of identifying a binding partner or binding partner precursor. The applicants emphasize that claim 1 is directed to a method of identifying the binding partner and not to a composition comprising the binding partner or it's precursor. The identification of the binding partner or it's precursor is a result of the method not a limitation of the claim and as such paragraph 1 of 35 U.S.C. § 112 does not require a structural description. Further, since the method is directed to identifying the binding partner and the method is applicable to identifying a broad range of potential binding partners the applicants can hardly be required to provide a structural description of a substance that is not yet identified. In view of these arguments the applicants respectfully request reconsideration and withdrawal of the rejection.

35 U.S.C. 102(b)

Claims 1, 4-5, 9-12 and 15-16 are rejected under 35 U.S.C. § 112 as being anticipated by Ivanenkov et al. (J. Biological Chemistry, 6/16/1995) and Kraft (J. Biological Chemistry 1/22/1999). Applicants respectfully traverse this rejection.

In Ivanenkov, the applicants would point to page 14653 at the bottom of the second column and continuing to page 14654 where the statement "... no proteins demonstrated complete identity with our S-100b binding peptide isolates... " is made and a list of 3 additional criteria that were used to select the binding partners is given. In addition it is also stated that they need to "restrict, at least initially, our focus to identification of peptides contained within molecules known to participate in regulating cytoskeletal interactions." These steps are not required or claimed in the present invention and the applicants therefore assert that the present invention, as claimed, is a patentably distinct improvement over Ivanenkov because the present invention identifies naturally occurring binding partners using fewer steps. In the case of Kraft, we have previously argued in our May 29, 2003 and September 23, 2004 responses that this reference does not disclose a method of identifying a naturally occurring binding partner.

In view of the above arguments the applicants respectfully request reconsideration and withdrawal of the rejection.

35 U.S.C. § 103(a)

Claims 1, 4-12 and 15-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kraft or Ivanenkov in view of Kay et al (U.S. 6,303,574). The applicants respectfully traverse this rejection.

In order to establish a prima facia case of obviousness there must be a motivation to combine the references, *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Kay is cited by the Examiner as teaching the use of a random sequence of 9-45 amino acid residues

encompassing a consensus sequence in order to improve the binding "selectivity's or specificities." Ivanenkov discloses in Table 1 that 80% of the unique sequences had a common motif of 8 amino acids, there is no disclosure that additional amino acids are needed. In Kraft, as was pointed out in our May 29, 2003 response, truncation of amino acid residues did not result in reduction of inhibitory activity, a result in direct contradiction to the motivation cited in Kay. Kraft also disclosed that a motif of 8 amino acids was all that is needed to achieve binding. Therefore one of ordinary skill in the art would have no motivation to combine Ivanenkov or Kraft with Kay to produce a longer length random peptide "in order to locate and fingerprint the motif with 'high specificity and selectivity.'"

In Kraft we would also point out that the statement in the second paragraph of the Discussion on page 1984 "RGD-dependent extracellular matrix binding to αvβ6 is inhibited strongly by peptides containing DLXXL sequences that bear no close similarity to sequences in fibronectin." Because fibronectin is a known naturally occurring binding partner of αvβ6, this statement can be construed as teaching away from the present invention as the skilled artisan would not be motivated by this statement to use the method of Kraft to find naturally occurring binding partners.

In view of these arguments the applicants respectfully request reconsideration and withdrawal of the rejection.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 2598-4004US1. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 2598-4004US1. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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Dated: June 16, 2005

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